DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015927
Date Inspected: 30-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Li Yang and Zhu Zhong Hai	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☐ No ☑ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes ☑ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 11DW

This QA Inspector performed Green Tag Dimension Control Inspection for the Segment 11DW at Panel Points (PP) 104, PP 105 and PP 106 at the following locations:

The Cope hole dimensions located at the Floor Beam to Bottom Panel, Floor Beam to Side Panel and at Longitudinal Diaphragms were verified and measured at the Panel Points (PP) 104, PP 105 and PP 106 at the Cross Beam (CB) and Bike Path (BK) side. The QA Inspector measured the cope hole dimensions using a 150mm steel ruler.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition. Please reference the pictures attached for more comprehensive details.

Segment 9BE

This QA Inspector performed Green Tag Dimension Control Inspection for the Segment 9BE between Panel Points (PP) 74 to PP 74.5; PP 75 to PP 75.5 and PP 75.5 to PP 76 at the following locations:

The vertical offset was verified and measured after bolting from Work Point E4 towards Work Point E6 at Side Panel (SP) at FL3 location Cross Beam (CB) Side, T-Ribs to T-Ribs at the above mentioned Panel Points. The QA Inspector measured the Vertical Offset on the T-Rib flange using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9DE

This QA Inspector performed Green Tag Dimension Control Inspection for the Segment 9BE between Panel Points (PP) 80 to PP 80.5; PP 81 to PP 81.5 and PP 81.5 to PP 82 at the following locations:

The vertical offset was verified and measured after bolting from Work Point E4 towards Work Point E6 at Side Panel (SP) at FL3 location Cross Beam (CB) Side, T-Ribs to T-Ribs at the above mentioned Panel Points. The QA Inspector measured the Vertical Offset on the T-Rib flange using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9BE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Side Panel T-Ribs to T-Ribs at FL3 location at Panel Point (PP) 76 for Segment 9BE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00445 dated July 30, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220105 and the final torque value established was 380 N-m.

The bolt sizes used were M22 x 80 RC Lot# DHGM220091 and the final torque value established was 460 N-m.

The manual torque wrench used to verify tension was S/N XQ2-666. Please reference the pictures attached for more comprehensive details.

Segment 9DE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Side Panel T-Ribs to T-Ribs at FL3 location at Panel Points (PP) 81 and PP 82 for Segment 9DE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00445 dated July 30, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220105 and the final torque value established was 380 N-m.

The bolt sizes used were M22 x 80 RC Lot# DHGM220091 and the final torque value established was 460 N-m.

The manual torque wrench used to verify tension was S/N XQ2-666.

Segment 9BW to Segment 9CW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as SP730-001-43 and SP730-001-44. The welder identification was 045196 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel T-Ribs web at transverse splice weld.

Segment 9CW to Segment 9DW

This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The Weld joint was designated as BP100-001-31 and BP100-001-33. The welder identification was 049220 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. The piece mark was identified as the Bottom Panel T-Ribs web at transverse splice weld.

Segment 9CW to Segment 9DW

This QA Inspector observed the in process fillet welding operation by the Flux Cored Arc Welding (FCAW) process. The Weld joint was designated as BP154-001-38 and BP100-001-42. The welder identification was 046706 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2132. The piece mark was identified as the Bottom Panel T-Ribs web at transverse splice weld.

Segment 9CW to Segment 9DW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as BP099-001-020 and BP099-001-22. The welder identification was 057333 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1. The piece mark was identified as the Bottom Panel T-Ribs web at transverse splice weld.

Segment 9CW to Segment 9DW

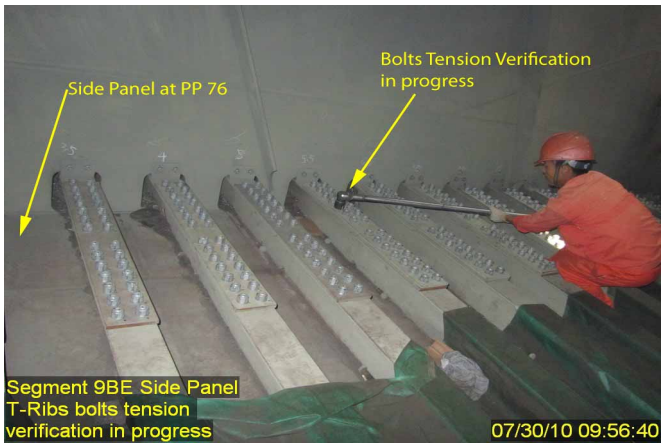
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as BP153-001-024 and BP153-001-26. The welder identification was 041713 and was observed welding in the 3G (Vertical) position

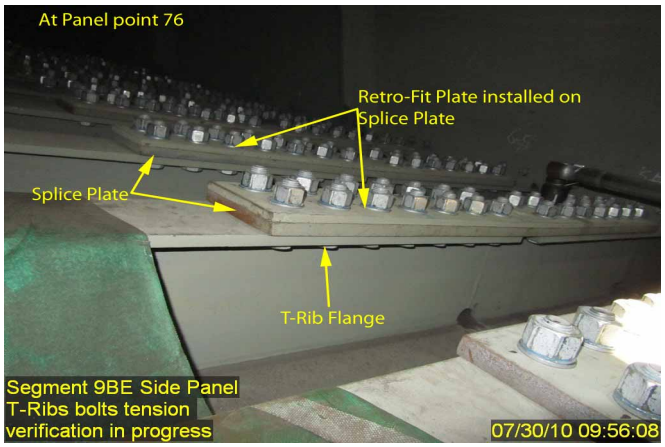
using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1. The piece mark was identified as the Bottom Panel T-Ribs web at transverse splice weld.

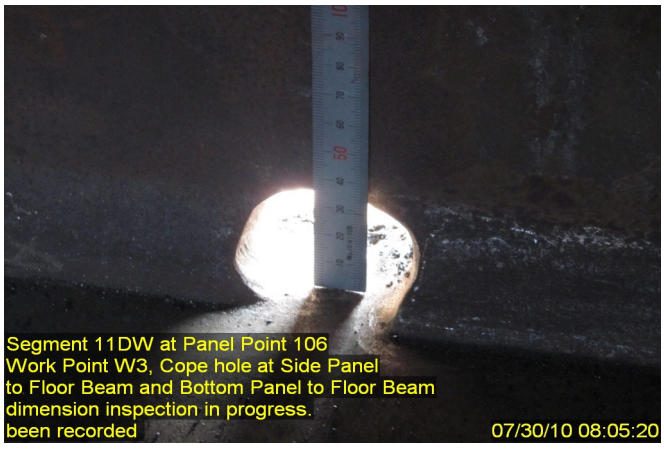
Segment 9DW to Segment 9EW

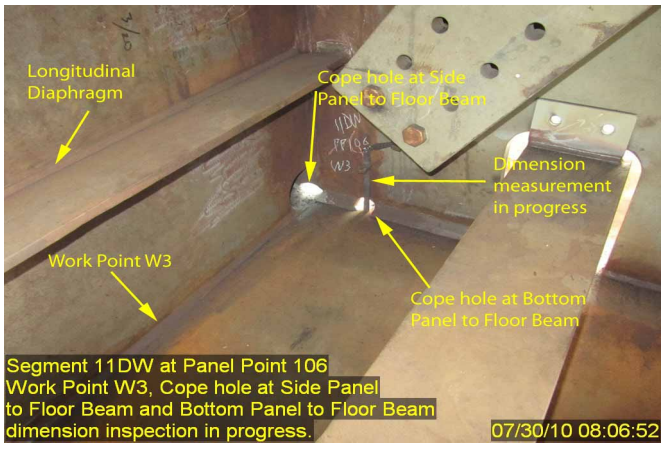
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW9C-008. The welder identification was 053316 and 040759 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-2231. The piece mark was identified as the Bottom Panel transverse splice weld.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.









Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 5 of 5)

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer